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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,365	09/25/2003	Baldev S. Ahluwalia	GEMS8081.149	2364
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ZIOLKOWSKI PATENT SOLUTIONS GROUP, SC (GEMS)				
136 S WISCONSIN ST				
PORT WASHINGTON, WI 53074				
EXAMINER				
CHENG, JACQUELINE				
ART UNIT		PAPER NUMBER		
3768				
NOTIFICATION DATE		DELIVERY MODE		
05/16/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/605,365

Applicant(s)

AHLUWALIA ET AL.

Examiner

JACQUELINE CHENG

Art Unit

3768

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 and 16 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 17 is/are rejected.
- 7) ☒ Claim(s) 7, 9-14 and 18-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/06)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Shankaranarayanan (US 7,251,520 B2).

4. The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in

the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

5. Shankaranarayanan discloses a method of setting a pulse sequence to acquire imaging data in a moving table MRI. The system comprises the usual MRI parts including the standard gradient coils positioned about a bore, transmitting and receiving components for transmitting and receiving a RF signal, and control and arithmetic operation components (col. 8 line 19-50, fig. 1). The imaging step of this apparatus include a step of the technologist inputting a series of imaging parameter identifiers such as TR, T1, flip angle, and the like. This pulse sequence can be a gradient echo sequence with a spectrally selective RF pulse. Tailoring a pulse sequence would include determining details such as the length of the train of alpha pulses to be applied in the gradient echo sequence (col. 7 line 52-col. 8 line 8, col. 6 line 2-4, col. 4 line 10-11, col. 4 line 40-49). The pulse sequence is created on the fly as once the imaging parameters are inputted the pulse sequence is tailored to the parameters and then applied. Also throughout the imaging, as the portion that is to be imaged changes throughout the scan, a different contrast property or different image quality might be needed and therefore the image parameters and pulse sequence would need to be changed on the fly (col. 7 line 39-51).

6. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shankaranarayanan as applied to claim 3 above, and further in view of Foo'967 (US 5,256,967). Shankaranarayanan does not explicitly disclose many details about the actual pulse sequence that is applied to the tissue. It would be obvious to use any well known pulse sequence that would

provide the desired image and which is best suited for the region of interest that is to be imaged. For example if the region of interest that is being examined is the breast tissues for tumors, it would be obvious to use a pulse sequence such as disclosed by Foo'967 as the pulse sequence in Foo'967 provides a good image in which to distinguish tumors from fat tissues by using a pulse sequence which suppresses the fat tissues after applying spectrally selective RF inversion pulses (col. 3 line 38-55, col. 4 line 23-68).

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Foo'946 (US 6,498,946 B1). Foo'946 discloses an MRI system which comprises the usual MRI parts including the standard gradient coils positioned about a bore, transmitting and receiving components for transmitting and receiving a RF signal, and control and arithmetic operation components (col. 2 line 30-35, fig. 1). In the system of Foo'946 an inversion pulse is applied and then a series of excitation (alpha) pulses is applied such that the signal from the tissue (blood) is near a null point. Although Foo'946 does not explicitly state determining the time interval and the number of pulses, in order to perform the timing execution, these factors must be known or else too few or too many excitation pulses could be applied and the desired result of reaching the null point will not be achieved (col. 2 line 5-12).

Allowable Subject Matter

8. Claims 7, 9-14, and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 15 and 16 are allowed.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACQUELINE CHENG whose telephone number is (571)272-5596. The examiner can normally be reached on M-F 10:00-6:30.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian L. Casler/
Supervisory Patent Examiner, Art Unit
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